

XIX. *A Note on Elymnias borneensis*, Wallace. By
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With a Note by COLONEL CHARLES T. BINGHAM,
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THERE has been much confusion over this species, which was first described from a female specimen by Dr. A. R. Wallace in 1869 (Trans. Ent. Soc. Lond., p. 324); in 1887 Staudinger figured what he supposed to be the male (Exot. Schmett., Pl. 86), but Fruhstorfer in 1899 (Berl. Ent. Zeitschr., xliv, p. 57) rightly pointed out that Staudinger's figure is that of a female; however, he then goes on to state that the true male is "*ganz blau und gehört mit *mehida*, Hew., und *sumatrana*, Wall., zusammen in eine andere Gruppe und zwar in das sub-genus *Bruasa*, Moore."*

Now this is entirely wrong; the male alluded to by Fruhstorfer is the *E. borneensis* of Grose-Smith described in 1892 (Ann. Mag. N. H., p. 428), the female of which resembles the females of the other species of the sub-genus *Bruasa*; none of them are Pierine mimics as is *Elymnias borneensis* ♀, Wall.

What then is the male of Wallace's species? It is the butterfly wrongly termed *Elymnias esaca*, Westwood (Borneo). The type of *E. esaca*, Westw., was originally recorded as from the "East Indies," and the locality "Assam" subsequently quoted in some works on Oriental Lepidoptera appears to be quite erroneous; *E. esacoides*, de Nicév., from Perak and Sumatra is, judging from specimens in the British Museum, identical with *E. esaca*, Westw., and *E. godfreyi*, Dist., from the Malay Peninsula and Sumatra is, in all probability, the female of the species. *E. esaca*, Westw., belongs to the sub-genus *Agrusia*, Moore, and the other species of the sub-genus are *E. leontina*, Fruhst., *E. maheswara*, Fruhst., *E. andersoni*, Moore, *E. egialina*, Feld., and *E. borneensis*, Wall. All the males of this sub-genus are black on the upper-side with a sub-marginal row of green maculæ on both fore- and hind-wings (in *E. borneensis* the maculæ on the hind-wing are obsolescent); the under-side is cryptically coloured, being dark fuscous mottled and freckled with lighter

markings; the females, so far as they are known, are Pierine mimics. The males of some species are fairly close mimics of such species of *Euthalia* (sub-genus *Cynitia*, Moore) as *coeytus*, Fab., and *lepidea*, Butl., which have the broad band on the hind-wings of a greenish tinge; *Elymnias andersoni*, Moore, from the Mergui Archipelago, has the maculae on the upper-side of a bluish-green, judging at any rate from Moore's figure (*Lepid. Ind.*, vol. ii, Pl. 143, figs. 2 and 2a), and in general appearance the insect approximates to *Euthalia andersoni*, Moore, from the same locality, a species with a pale-blue band to the hind-wing above. *Elymnias borneensis*, Wall., ♂, is not at all like any of the pale-blue banded *Cynitias* of Borneo, and I do not consider it to be a mimetic form. In the males of *Elymnias borneensis* and *E. esaca* there are two or three red spots at the base of the hind-wing below; perhaps in this sex these spots serve to increase the cryptic character of the under-side of the wing (though it is difficult to see how this can possibly be the case), but it is interesting to note that in the females of these two species these basal red spots play a most important part in increasing the resemblance to a Pierine such as *Delias pardemia*, which is similarly provided with red spots on the fore-wing below. The males of *Elymnias andersoni*, *E. leontina*, and *E. maheswara* are not provided with the basal red spots, but the female of *E. maheswara* has quite a large basal red area and is a good Pierine mimic; the females of the other species are not known. It is impossible to state definitely whether the red spots in the male are ancestral characters that have been lost by *E. andersoni*, *E. maheswara*, etc., or whether they are characters newly acquired by the males of *E. esaca* and *E. borneensis*, but since the female *maheswara* is a much closer Pierine mimic than the females of *esaca* and *borneensis* it is presumably a more highly-evolved form; so that the evidence, poor though it is, points to the conclusions: (i) that the red spots in the male are ancestral characters retained by the less highly-specialised forms, lost in the more specialised forms; (ii) that in the female these ancestral characters being of the highest importance in producing a Pierine appearance are more developed in the higher forms than in the lower; or, in other words, in the male sex the basal red spots tend to disappear, in the female sex they tend to increase *pari passu* with increased specialisation.

The following table shows what I believe to be the true relationships between the different forms :—

Sub-genus AGRUSIA.

NAME OF SPECIES.	DISTRIBUTION.	REMARKS.
<i>Elymnias esaca</i> , Westw. (= <i>E. esacoides</i> , de N.).	Sumatra and Malay Peninsula.	♀ = <i>E. godferyi</i> , Dist. Male with red spots.
<i>Elymnias esaca andersoni</i> , Moore.	Mergui Archipelago.	♀ not known. ♂ a fair mimic of <i>Euthalia andersoni</i> , Moore. Male without red spots.
<i>Elymnias esaca leontina</i> , Fruhst.	Nias.	♀ not known. ♂ without red spots.
<i>Elymnias esaca borneensis</i> , Wall.	Borneo.	♂ with red spots.
<i>Elymnias maheswara</i> , Fruhst.	Java (Mt. Gede).	♂ without red spots. ♀ highly specialised.
<i>Elymnias egialina</i> , Feld.	Philippines.	♂ without red spots. ♀ not known.

I may add that I have proposed (Journ. Roy. As. Soc. Straits Br., No. 41, p. 104, 1904) the new name *trepsichroides* for the *E. borneensis* of Grose-Smith; the confusion over these species was made greater when Mr. Grose-Smith described the female of his *Elymnias konga* as the female of his *E. borneensis*. The true female of *E. trepsichroides* is described by me (l. c., p. 104).

Note on Mr. Shelford's paper on Elymnias borneensis, Wallace.

Mr. Shelford's contention that *E. esaca*, Westw., is the male of *E. borneensis*, Wall., is quite borne out by the specimens of *E. esaca* in the collection of the British Museum.

Further comparing the type of *E. esaca*, which is a male with the description and figure of *E. esacoides*, de Nicéville (Jour. Bomb. N. H. Soc., 1892, p. 323, Pl. H, fig. 2), there can be no reasonable doubt that *E. esacoides*, de Nicéville =

E. esaca, Westwood. Both have the red spots (unaccountably omitted in Hewitson's figure of *E. esaca*, Ex. Butl. iii, Melanitis, Pl. 1, fig. 5) on the under-side of the hind-wing near the dorsal margin. These spots are perhaps a little larger in de Nicéville's figure than in the type specimen, but that is all; for the rest marking for marking the two are identical.

Again comparing Wallace's description of *E. borneensis*, the type of which was a female, with a female specimen in the British Museum collection labelled *E. godferyi*, which agrees with the figure in Distant's *Rhop. malayana*, it seems to me clear that *E. godferyi*, Distant, must also be sunk as a synonym of *E. esaca*, Westwood.

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